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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,560	03/23/2004	Weirong Wang	5260-000201/US	2572
28997	7590	08/15/2005	EXAMINER	
HARNESS, DICKEY, & PIERCE, P.L.C			MULLINS, BURTON S	
7700 BONHOMME, STE 400			ART UNIT	
ST. LOUIS, MO 63105			PAPER NUMBER	
			2834	

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/806,560	WANG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Burton S. Mullins	2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.  
     4a) Of the above claim(s) 1-23 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 24-27, 29, 33-36, 39, 41-46, 48-52, 57 and 58 is/are rejected.  
 7) ☒ Claim(s) 28, 30-32, 37, 38, 40, 47 and 53-56 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 1-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on July 28, 2005.

### *Claim Objections*

2. Claims 24, 32-35 and 42-43 are objected to because of the following informalities:

In claim 24, change “positioning” to –positioned--.

In claim 32, change “positions” to –is positioned--.

In each of claims 33-35, change “positioning” to –positioned--.

In claim 42, change “positioning” to –positioned— and “positions” to –is positioned--.

In claim 43, change “positioning” to –positioned--.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 24-27, 29, 33-36, 39, 41-46, 48-52 and 57-58 are rejected under 35 U.S.C. 102(e) as being anticipated by Kolomietsev et al. (US 6,844,653). Kolomietsev teaches an end cap

Art Unit: 2834

(bobbin) 206 of an electromagnetic machine having a stator with a plurality of adjacent segments (teeth) 202 (Fig.11), the end cap positioned on one of the adjacent segments 202 and having first and second ends (extensions and recesses) 222 and 224, wherein the ends on the end cap couple to ends on adjacent end caps to substantially hold the adjacent segments together (c.8, lines 34-52).

Regarding claim 25, the extension 222 is on one end of each bobbin/end cap, the recess 224 on the other end.

Regarding claim 26, the nature of the coupling allows for adjustment.

Regarding claim 27, the extension 222 comprises the male member, the recess 224 the female member, with the male and female members on adjacent bobbin/end caps mating with one another.

Regarding claim 29, the recess 224 of the female member is a slot, into which the extension/male member 222 “snaps”.

Regarding claims 33-34, there are plural adjacent stator teeth/segments 202 and plural bobbin/end caps 206. The extension 222 and recess 224 function as means for coupling the first and second ends of the adjacent bobbin/end caps 206 to each other, thereby substantially holding the adjacent teeth/segments 214 together.

Regarding claims 35 and 42-43, note that each bobbin/end cap 206 comprises a body having a body surface positioning against the segment surface of one of the segments such that the body surface and the segment surface lie on substantially the same plane (the planar top and bottom of the bobbin/end cap 206, though not shown in Fig.11, are disclosed at c.8, lines 20-28, which describes the bobbin/end caps 206 as having a hollow portion that surrounds a

Art Unit: 2834

tooth/segment 202), wherein a portion of the body surface positions against the surface of the adjacent segment, i.e., the top or bottom of each tooth/segment 202, such that the surfaces of the adjacent segments lie substantially on the same plane.

Regarding claim 36, the extension/male member 222 can be considered a “finger extending from a first end of the body”.

Regarding claim 39, the extension 222 comprises the male member, the recess 224 the female member, with the male and female members on adjacent bobbin/end caps mating with one another.

Regarding claim 41, the recess 224 of the female member is a slot, into which the extension/male member 222 “snaps”.

Regarding method claims 44-46 and 50-51, these are inherent to the structure of Kolomietsev, which includes a wire 30 wound around the bobbin/end caps (Fig.1; c.3, lines 54-57). Regarding claim 48, the coupling permits movement parallel to the stator axis. Regarding claims 49 and 51-52, the bobbins are inherently fit by interference on the teeth and to each other, with each side of the bobbin/end cap comprises a “leg” that fits against a corresponding side of each tooth. Regarding claim 57, ends of adjacent bobbin/end caps are mated together.

#### ***Allowable Subject Matter***

5. Claims 28, 30-32, 37-38, 40, 47 and 53-56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2834

Regarding claim 28, Kolomietsev does not teach that the male member includes a bifurcate catch extending from the first end of the body portion and snap fitting in the female coupling. The remaining prior art does not remedy this deficiency.

Regarding claim 30, Kolomietsev does not teach that the male member positions adjacent a slotted end of the segment, and the female member positions adjacent a ridged end of the segment. The remaining prior art does not remedy this deficiency.

Regarding claim 31, Kolomietsev does not teach that the ends of the end cap define slots, wherein a clip has a first and second portions fitting in the adjacent slots in the adjacent ends of the adjacent end caps. The remaining prior art does not remedy this deficiency.

Regarding claim 32, Kolomietsev does not teach a finger extending from the second end and having a side substantially on the same plane as the surface of the segment, wherein the finger fits within the slot on the adjacent end cap and the side of the finger positions against the surface of the adjacent segment. The remaining prior art does not remedy this deficiency.

Regarding claim 37, Kolomietsev does not teach that the body includes a slot defined in a second end of the body, the slot having an open side exposing the surface of the segment and receiving the finger of the adjacent end cap on the adjacent segment. The remaining prior art does not remedy this deficiency. The remaining prior art does not remedy this deficiency.

Regarding claim 38, Kolomietsev does not teach a finger positioned adjacent a ridged end of the segment, and a slot positioned adjacent a slotted end of the segment. The remaining prior art does not remedy this deficiency.

Art Unit: 2834

Regarding claim 40, Kolomietsev does not teach a male member that includes a bifurcate catch extending from the first end and snap fitting in the female member. The remaining prior art does not remedy this deficiency. The remaining prior art does not remedy this deficiency.

Regarding claim 47, Kolomietsev does not teach clips in slots and therefore does not teach a step (c) comprising the step of fitting clips in slots defined in the adjacent ends on the adjacent end caps. The remaining prior art does not remedy this deficiency.

Regarding claim 53, Kolomietsev does not teach the method wherein the step of substantially covering an outboard surface of each of the pole ends with the legs of the end caps. The remaining prior art does not remedy this deficiency.

Regarding claim 54, Kolomietsev does not teach the method including forming the slot area with an angled surface on each end cap that angles from the opposing surface of the tooth portion to the pole end. The remaining prior art does not remedy this deficiency.

Regarding claim 56, Kolomietsev does not teach the method including positioning a ridged end of one of the segments into a slotted end of another of the segments. The remaining prior art does not remedy this deficiency.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach

Art Unit: 2834

the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Burton S. Mullins  
Primary Examiner  
Art Unit 2834

bsm  
11 August 2005